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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Knut Magne Risvik

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EXAMINER

LY, CHEYNE D

ART UNIT

PAPER NUMBER

2168

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,641	Applicant(s) RISVIK ET AL.	
	Examiner Cheyne D. Ly	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-19 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: Microsoft Press Computer Dictionary 3rd Edition (page 247).

DETAILED ACTION

1. Applicants' arguments filed June 05, 2006 have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
3. The cancellation of claims 12 has been acknowledged.
4. Claims 1-11 and 13-19 are examined on the merits.

OBJECTIONS

5. Claim 13 is objected to because of the term "dispatch" in line 12. The instant specification describes the claimed invention as directed to a "dispatcher" (page 7, [0026]). Appropriate correction is required.

CLAIM REJECTIONS - 35 U.S.C. § 112, SECOND PARAGRAPH

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
7. Claims 1-11 and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim 1, lines 5-6, recites "mapping based on respective rankings...", which causes said claim to be vague and indefinite because the data items have not been ranked before said

rankings is utilized in the “mapping step.” For example, Applicant describes ranking occurring before said ranking is utilized in the mapping (pages 2-3, [0030]). The same issue is present in claims 8, 11, and 13. Claims 2-7, 9, 10, and 14-19 are rejected for being dependent from claim 1, 8, 11, or 13.

9. Claim 8 recites the limitation "result data items" in line 14. There is insufficient antecedent basis for this limitation in the claim. It is noted claim 8 is not clear as to whether the antecedent basis for the phrase “result data items” is from the “retrieving” step, “mapping” step, or “receiving” step, because each of the respective steps could generate result data items. Claims 9 and 10 are rejected for being dependent from claim 8.

CLAIM REJECTIONS - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

12. Claims 1-7 are directed to the mere rearrangement of data without producing a physical transformation, or any tangible results from the claimed method. For example, the instant specification, pages 4-6, describes alternate embodiments of the claimed invention wherein the index is utilized to search a database to generate the result data items. However, the result data items described by the instant specification does not inherently flow from the claimed invention as recited by claims 1-7.

CLAIM REJECTIONS - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 1-11 and 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burrows (US 5787435 A) taken with Doi et al. (US005305208A) (Doi hereafter).

CLAIM INTERPRETATIONS

16. It is noted that the instant specification does not specifically define the limitation of index or sub-index. The limitation of index has been attributed with the customary and ordinary definition as specified by the Microsoft Press Computer Dictionary 3rd Edition (page 247). Further, the limitation of sub-index has been interpreted as a subset of the index. Therefore, Burrows describes index entries having identical bucket numbers are written to a single index file associated with the bucket number in a collating order of the unique words. A summary

file is generated for each index file by periodically sampling the data being written to the index file. Index files and their associated summary files are grouped into a tier of files, there being one tier for each batch of records (sub-index) parsed (Abstract).

BASIS FOR PRIOR ART

17. In regard to **claim 1**, Burrows describes a method for indexing data items in a database (Abstract etc.), the method comprising:

Retrieving data items from a database (column 3, lines 4-9);

Producing a primary index of the data items (column 4, lines 30-64);

Mapping the data items on to at least a first tier and a second tier (column 13, lines 6- based on respective rankings of the data items (column 26, line 22, to column 28, line 22);

Producing at least a first and a second sub-index from the primary index based on the mapping (column 13, lines 21-44).

18. Burrows describes the above method as directed to nodes in a tree structure (column 16, lines 9-18).

19. However, Burrows does not describe the limitation of “search nodes logically in...a plurality of columns.”

20. Burrows describes improvements (column 9, lines 57-60) by mapping an index of a database into an array of files as directed to unique words (Abstract etc.) and graphic symbols (column 9, lines 30-33). While, Doi describes a database retrieval system based on user input keywords (column 1, lines 15-27). One of ordinary skill in the art at the time of

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the invention would have been motivated by Burrows to utilized the index of a database in the system of Doi.

Specific to claim 1, Doi describes “search nodes logically in...a plurality of columns” (column 4, lines 62-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

21. In regard to **claim 2**, Burrows describes the database is a collection of pages and documents available through the World Wide Web (column 3, lines 21-53). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

22. In regard to **claim 3**, Burrows describes the mapping is based on a static relevance score of the data items (column 25, line 45, to column 26, line 21). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

23. In regard to **claims 4 and 5**, Burrows describes executing a search query log for a number of queries on the database (column 28, lines 24-47); and receiving the results of the search query log (column 28, lines 25-27); wherein the first sub-index is based on the results of the query log (column 28, lines 34-47). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of

Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

24. In regard to **claim 6**, Burrows describes the mapping is based on a value context of the data items (column 14, line 44, to column 15, line 5). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

25. In regard to **claim 7**, Burrows describes the data items are web pages (column 3, lines 21-53) and mapping is based on a relevance score of the web pages (column 26, line 22, to column 28, line 22). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

26. In regard to **claim 8**, Burrows and Doi describe the claimed invention as cited above. Further, Burrows describes searching the first tier for result data items relating to the search query (column 13, lines 45-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

27. In regard to **claims 9, 10, 15, and 16**, Burrows and Doi describe the claimed invention as cited above. Further, Burrows describes “the first tier,...a next batch the next tier, etc. and a fifth batch would produce tier 1014...since switching from one tier to another while searching the index...subsequent tiers are merged into a previous tier only if the amount of data in a subsequent (later) tier is at least as much as the data stored in the previous tier of the

same bucket” (column 13, line 45, to column 14, line 6). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

28. In regard to **claim 11**, Burrows and Doi describe the claimed invention as cited above. Further, Burrows describes searching a crawler which crawls the database to find data items (column 4, lines 5-6). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

29. In regard to claims **13, 14, and 17-19**, Burrows and Doi describe the claimed invention as cited above. Further, Burrows describes a dispatch (search engine) (column 3, line 65, to column 4, line 14, and column 15, lines 5-25). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use the method of Burrows with storing the “search nodes logically in...a plurality of columns” as describe by Doi.

CONCLUSION

30. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the

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specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

31. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571) 272-3642.

C. Dune Ly / *CDL*
Patent Examiner
6/21/06

